

REMARKS

Claims 24, 25, 27-30 and 32-46 are pending in this application. By this Amendment, claims 24, 30, 36, 38, 39 and 41 are amended; and claims 26 and 31 are canceled. No new matter is added. In view of the foregoing amendments and following remarks, reconsideration and allowance are respectfully requested.

I. Rejection of Claims 24-35 under 35 U.S.C. §103(a)

The Office Action rejects claims 24-35 under 35 U.S.C. §103(a) over U.S. Patent No. 5,852,429 to Scheffer et al. ("Scheffer") in view of U.S. Patent No. 5,818,557 to Konuma et al. ("Konuma") and U.S. Patent No. 6,232,938 to Tsuchida et al. ("Tsuchida"). This rejection is respectfully traversed.

Scheffer does not teach, disclose or suggest "dividing a first time period which is part of a single frame into a plurality of sub-fields, and in each sub-field,... the cumulation of on periods during the first time period of the single frame being variably controlled in accordance with a gray-scale level of the pixel for the gray-scale display; and applying an effective voltage to the pixels in a second time period, the second time period being dispersed in the period of the single frame, in accordance with a threshold voltage of a transmissivity characteristic," as recited in claim 24, and as similarly recited in claim 30.

The Office Action at page 3 admits that Scheffer does not teach "turning on or off pixel by applying to the pixel a one of two-level signals for a period of sub-field, the cumulation of on periods during the first time period of the single frame being variably controlled in accordance with a gray-scale level of the pixel for the gray-scale display".

Konuma et al. does not cure the deficiencies of Scheffer. Konuma discloses a single frame divided into five subframes having varying durations in multiples of two (col. 31, lines 46-56). However, Konuma does not disclose or suggest a second time period being dispersed in the period of a single frame, as recited in claims 24 and 30.

Tsuchida also does not cure the deficiencies of Scheffer. Tsuchida discloses "one of three pixels on the three layers that compose one picture element is always selected at each of T1, T2 and T3" (col. 15, lines 7-10). However, Tsuchida also does not disclose or suggest a second time period being dispersed in the period of a single frame, as recited in claims 24 and 30.

Even if variously combined, Scheffer, Konuma and Tsuchida do not combine to result in the above-recited claim features.

Claims 24 and 30 would not have been rendered obvious by Scheffer in view of Konuma and Tsuchida. Claims 25 and 27-29 depend from claim 24, and claims 32-35 depend from claim 30, and thus, claims 25, 27-29 and 32-35 also would not have been rendered obvious by Scheffer in view of Konuma and Tsuchida. Accordingly, reconsideration and withdrawal of the rejections are respectfully requested.

II. Rejection of Claims 36-46 Under 35 U.S.C. §103(a)

The Office Action rejects claims 36-46 under 35 U.S.C. §103(a) over U.S. Patent 5,892,495 to Sakai et al. ("Sakai") in view of Scheffer, Konuma and Tsuchida. This rejection is respectfully traversed.

Sakai does not teach, disclose or suggest "the second period being dispersed in the period of the single frame; ...the cumulation of on period during the period first time period of the single frame being variably controlled in accordance with a gray-scale level of the respective pixel for a gray-scale display," as recited in claim 36, and as similarly recited in claims 38, 39 and 41.

The Office Action at page 7 admits that "Sakai does not teach the scanning line with respect to a single frame time and sub-field. Sakai also does not teach a data line-driving circuit with respect to signals 'each designating turning on or off each pixel in accordance with a gray-scale level of respective pixels.'"

Sakai discloses a liquid crystal panel 1 provided with a plurality of data lines DL and a plurality of scanning lines SL, a data line driving circuit 2, a scanning line driving circuit 3, and an address signal generating circuit 4 (column 9, lines 23-26). However, Sakai et al. does not relate to any subject matter regarding a second period being dispersed in the period of a single frame, as recited in claims 36, 38, 39 and 41.

Scheffer, Konuma and Tsuchida do not cure the deficiencies of Sakai. As discussed above, Scheffer, Konuma and Tsuchida do not disclose or suggest "the second time period being dispersed in the period of the single frame; ...the cumulation of on periods during the first time period of the single frame being variably controlled in accordance with a gray-scale level of the respective pixel for a gray-scale display," as recited in claim 36, and as similarly recited in claims 38, 39 and 41. Accordingly, Scheffer, Konuma and Tsuchida do not cure the deficiencies of Sakai.

Claims 36, 38, 39 and 41 would not have been rendered obvious by Sakai in view of Scheffer, Konuma and Tsuchida. Claim 37 depends from claim 36, claim 40 depends from claim 39, and claims 42-46 depend from claim 41. Thus, claims 37, 40 and 42-46 also would not have been rendered obvious by Sakai in view of Scheffer, Konuma and Tsuchida. Accordingly, reconsideration and withdrawal of the rejections are respectfully requested.

III. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 24, 25, 27-30 and 32-46 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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Date: August 12, 2004

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